REMARKS

The specification and Abstract have been amended and the claims have been replaced to place the application in better form for examination. Favorable consideration is respectfully solicited.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: ______________________

Stephen J. Tytran
Registration No. 45,846

P.O. Box 1404
Alexandria, Virginia 22313-1404
(919) 941-9240

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Attachment to Preliminary Amendment dated August 30, 2001

Marked Up Copy of Amendments
to the Specification Section Headings

Section heading at page 1, line 7, delete "Technical Field" and insert therefor --Background--.

Section heading at page 1, line 10, delete entirely.

Paragraph beginning at page 6, line 14:

Encapsulation of printed circuits, with or without active and/or passive [cuircuitry] circuitry, that are processed sequentially is necessary to prevent destruction of the circuit patterns, especially if they are made of environmentally sensitive materials and/or with very thin layers. There is a desire to reduce conductors of a circuit board to less than 5 μm thick and less than 20 μm wide. This has raised an interest in using less stable polymers such as acrylat as thin layers of dielectric. It has been proposed to use offset printing for manufacturing printed circuit boards and also for manufacture of active and passive components, such as transistor functions, resistors, capacitors, sensors, and emitters, with the same process by means of arranging tracks of conductive and semi conductive polymers. The process used is of an additive type. Using offset printing technology will enable manufacturing of surfaces in the order of 450 mm by 600 mm for a multiple of products with sizes in the range of approximately 100 mm by 150 mm to 10 mm by 10 mm. The finished products are unfortunately extremely [sensitve] sensitive to external physical contact. According to the invention, sequentially processed layers are built on an interface carrier. Thereafter a layer of adhesive is added to cover the sequentially processed layers and then a support carrier is stuck onto the adhesive. Alternatively a layer of adhesive is added to a support carrier after which the interface carrier is stuck to the support carrier with the sequentially processed layers closest to the adhesive on the support carrier. A sandwich construction is thus attained with the interface carrier on one side and the support carrier on the other side protecting the fragile layers within.

Paragraph beginning at page 6, line 6:

As an example, a temperature log of [a] frozen merchandize is desired. An appropriate circuit layout is manufactured on an interface carrier of at least semi-transparent polyester. The circuit side is joined by an adhesive with a cardboard box in which the frozen merchandize is to be transported. The cardboard box of the frozen merchanize will then function as the support carrier. The circuit with appropriate arranged tracks as sensors is mounted directly onto the object to be monitored and a readout of conditions can be made through the interface carrier by means of appropriate tracks arranged as light emitting diodes. The adhesive layer between the [carboard] <u>cardboard</u> box, the support carrier, and the circuit can be shaped such that sensors or electrical contacts are not covered but have a direct contact with the support carrier, while at the same time providing a sufficient seal.

Paragraph beginning at page 9, line 13:

In a final step, as shown in Figure 1e, a support carrier 199 is stuck onto the adhesive layer 190. Or alternatively a carrier with an adhesive layer is stuck onto the sequentially processed layers. The support carrier 199 will typically be in the order of millimeters to approximately 200 μm thick. The main purpose of the support carrier 199 is to provide a physical barrier and protection to the sensitive sequentially processed layers 110, 120. The support carrier 199 can, for example, be of paper, plastic or metal, be bendable or rigid, be a part of a [chassi] <u>chassis</u> or cover/case/housing of an apparatus in which the circuit board arrangement is mounted, or be a carrier/box onto which the circuit board arrangement is mounted. As an example, the casing might be of a [mobil] <u>mobile</u> phone or an accessory to it, such as a [blue tooth] <u>BlueTooth™</u> accessory, in which case the total electronic circuitry, with or without active or passive components, will take very little space and still be very well protected. If the support carrier 199 is a part of a casing, then most likely it will not be plane. The support carrier 190 may also comprise apertures, then preferably aligned with any apertures in the adhesive layer 190, for electrical access or access to any sensor on the outermost sequentially processed layer 120.

Attachment to Preliminary Amendment dated August 30, 2001

Marked Up Copy of Amendments
to the Abstract

An encapsulated circuit board arrangement [comprising] including a thin interface layer with one or more vias for input/output interface to the circuit is presented. The encapsulated circuit board arrangement further [comprises] includes one or more sequentially processed layers added to one side of the interface circuit. The sequentially processed layers are preferably made by additive offset printing technology. The encapsulated circuit board arrangement further [comprises] includes a layer of adhesive. A first side of the adhesive layer is attached on top of the uppermost and most exposed layer. The encapsulated circuit board arrangement further [comprises] includes a support carrier attached on a second side of the adhesive layer.